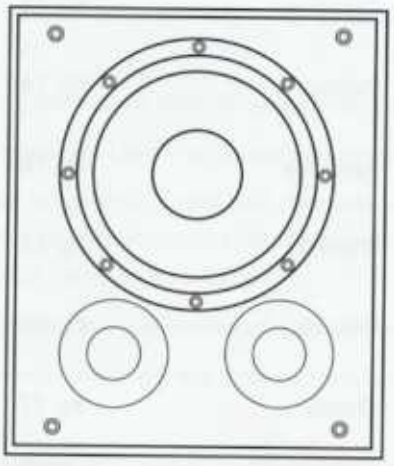
OWNER'S MANUAL

AS 6



B&W

LISTEN AND YOU'LL SEE

SAFETY INSTRUCTIONS

CAUTION:

To reduce the risk of electric shock, do not remove the back panel. No user-serviceable parts inside. Refer servicing to qualified personnel.]

EXPLANATION OF GRAPHICAL SYMBOLS

The lightening flash within an equilateral triangle is intended to alert you to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute an electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

1. Read Instructions - All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and use instructions should be followed.
5. Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet base ment, or near a swimming pool and the like.
6. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.
7. Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block theventilation openings; or placed in a built-in installation, such as a book case or cabinet, that may impede the flow of air through the ventilation openings.
9. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances that produce heat.
10. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. Grounding or Polarisation - The appliance is double insulated and should not be grounded. When using an extension power-supply cord or a power-supply cord other than that supplied with the appliance, it should be 2-core,fitted with the appropriate moulded-on plugs and carry safety approval appropri ate to the country of use.
12. Power Cord Protection - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed on or against them, paying particular attention to cords at plugs, convenience receptacles and the point where they exit from the appliance.
13. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.
14. Non-use Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
15. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
16. Damage Requiring Service - The appliance should be serviced by qualified personnel when:

    a. The power-supply cord or the plug has been damaged; or

    b. Objects have fallen, or liquid has been spilled into the appliance; or

    c. The appliance has been exposed to rain; or

    d. The appliance does not appear to operate normally, or exhibits a marked change in performance; ore.The appliance has been dropped, or the enclo sure damaged.

17. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

GB

WARNINGS:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

OBSERVE ALL WARNINGS ON THE EQUIPMENT ITSELF. TO AVOID ELECTRICAL SHOCK, DO NOT OPEN THE ENCLOSURE OR REMOVE THE AMPLIFIER FROM THE REAR PANEL. THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER ALL SERVICE QUESTIONS TO AN AUTHORISED B&W DEALER.

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS (POLARISED) POWER PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ENSURE THAT THE VOLTAGE INDICATED ON THE AMPLIFIER PANEL MATCHES THAT OF THE POWER SUPPLY.

THE MAINS FUSE IS LOCATED INSIDE THE AMPLIFIER MODULE. REPLACEMENT MUST BE OF THE SAME TYPE AND RATING AS SUPPLIED AND FITTED BY AN AUTHORISED B&W DEALER.

THE EQUIPMENT SHOULD NOT BE EARTHED (GROUNDED).

TO ENSURE ADEQUATE COOLING OF THE AMPLIFIER, OPERATE THE EQUIPMENT ONLY WITH THE HEATSINK FINS ALIGNED VERTICALLY.

IMPORTANT FOR UK ONLY:

The wires in this mains lead are coloured in accordance with the following code:

— blue: neutral

— brown: live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

— the terminal in the plug which is marked with the letter E, or by the earth symbol ⏚, or coloured green or green and yellow must be left unconnected.

— the wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

— the wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

THE SUBWOOFER IS HEAVY AND BULKY, IT SHOULD BE MOVED OR LIFTED BY AT LEAST TWO PEOPLE.

CHECK THAT THERE ARE NO CABLES UNDER THE CARPET THAT MAY BE DAMAGED BY THE SPIKES.

DO NOT WALK THE UNIT ON THE SPIKES AS THIS MAY CAUSE THEM TO BECOME DETACHED FROM THE CABINET AND CAUSE DAMAGE.

TAKE CARE NOT TO SPIKE THROUGH YOUR OWN FEET.

D

WARNHINWEISE:

UM BRAND- ODER STROMSCHLAGGEFAHREN VORZUBEUGEN, DIESES GERÄT NICHT REGEN ODER FEUCHTIGKEIT AUSSETZEN.

BEACHTEN SIE ALLE AUF DEM GERÄT BEFINDLICHEN WARNHINWEISE. ZUR VERMEIDUNG VON ELEKTRISCHEN SCHLÄGEN DAS GEHÄUSE NICHT ÖFFNEN ODER DEN VERSTÄRKER VON DER RÜCKSEITE ENTFERNEN. IM INNENBEREICH BEFINDEN SICH KEINE DURCH DEN ANWENDER ZU WARTENDEN TEILE. BEI ALLEN KUNDENDIENSTFRAGEN BITTE DEN AUTORISIERTEN B&W-HÄNDLER ANSPRECHEN.

ZUR VERMEIDUNG VON ELEKTRISCHEN SCHLÄGEN, DIESEN (POLARISIERTEN) STROMSTECKER NICHT MIT EINER VERLÄNGERUNGSSCHNURBUCHSE ODER ANDEREN AUSGÄNGEN VERWEN- DEN, WENN DIE POLE NICHT VOLLSTÄNDIG HINEINGESTECKT WERDEN KÖNNEN, UM MIT DEN POLEN NICHT IN BERÜHRUNG ZU KOMMEN.

STELLEN SIE SICHER, DAß DIE AUF DEM VERSTÄRKER ANGEGEBENE NETZSPANNUNG MIT DER STROMVERSORGUNG ÜBEREINSTIMMT.

DIE NETZSICHERUNG IST INNERHALB DES VERSTÄRKERMODULS UNTERGEBRACHT. ERSATZ NUR MIT SICHERUNGEN GLEICHEN TYPS UND WERTES, SO WIE SIE DURCH DEN AUTO-RISIERTEN B&W-FACHHÄNDLER GELIEFERT UND EINGEBAUT WERDEN KÖNNEN.

DAS GERÄT SOLLTE NICHT GEERDET WERDEN.

ACHTEN SIE DARAUF, DAß EINE AUSREICHENDE LÜFTUNG GEWÄHRLEISTET IST UND BE-TREIBEN SIE DAS GERÄT NUR, WENN DIE KÜHLRIPPEN VERTIKAL AUSGERICHTET SIND.

DER SUBWOOFER IST SCHWER UND SPERRIG, DAHER SOLLTE DAS BEWEGEN UND ANHEBEN VON MINDESTENS ZWEI PERSONEN DURCHGE-FÜHRT WERDEN.

ÜBERPRÜFEN SIE, DAß UNTER DEM TEPPICH KEINE KABEL VERLAUFEN, DIE DURCH DIE SPIKES BESCHÄDIGT WERDEN KÖNNTEN.

BITTE BEWEGEN SIE DAS GERÄT NICHT AUF DEN SPIKES, DA DIESE SICH DADURCH VOM GEHÄUSE LÖSEN UND SCHADEN VERURSACHEN KÖN-NTEN.

GEBEN SIE ACHT, DAß SIE MIT DEN SPIKES IHRE FÜßE NICHT VERLETZEN.

I

AVVERTENZE:

PER EVITARE INCENDI O FOLGORAZIONI NON ESPORRE L'APPARECCHIATURA A PIOGGIA O UMIDITÀ.

RISPETTARE TUTTE LE AVVERTENZE SULLE APPARECCHIATURE STESSE .PER EVITARE SCOSSE NON APRIRE IL CONTENITORE O RIMUOVERE L'AMPLIFICATORE DAL PANNELLO POSTERIORE. NON CONTIENE PARTI CHE L'UTENTE POSSA UTILIZZARE. PER QUALSIASI DOMANDA RIVOL-GERSI AL DISTRIBUTORE B&W AUTORIZZATO.

PER EVITARE FOLGORAZIONI, NON UTILIZZARE QUESTA SPINA DI CORRENTE (POLARIZZATA) CON UNA PROLUNGA O ALTRO A MENO CHE LE LAMELLE NON SIANO ACCURATAMENTE INSERITE PER EVITARE L'ESPOSIZIONE DELLA LAMELLA STESSA.

CONTROLLARE CHE IL VOLTAGGIO DELL'AMPLIFICATORE SIA QUELLO DELLA RETE.

SOSTITUITE IL FUSIBILE DELLA RETE SOLO CON LO STESSO TIPO E LA STESSA POTENZA COME INDICATO SULL'ETICHETTA DI VOLTAGGIO POSTA VICINO ALLA SPINA D'INGRESSO DELLA RETE. TOGLIETE L'ALIMENTAZIONE E RIMUOVETE IL CAVO PORTANTE DALL'AMPLIFICATORE

INTRODUCTION

Thank you for purchasing the B&W AS6 Active Subwoofer.

Since its foundation in 1966, the continuing philosophy of B&W has been the quest for perfect sound reproduction. Inspired by the company's founder, the late John Bowers, this quest has entailed not only high investment in audio technology and innovation but also an abiding appreciation of music and the demands of film sound to ensure that the technology is put to maximum effect.

The AS6 has been designed for home theatre installations and to augment the bass performance of 'full range' speakers in stereo audio use. Adding the subwoofer to your system not only extends the bass to lower frequencies, it improves the midrange clarity by reducing the low-frequency demands on your existing speakers.

The subwoofer is magnetically shielded for use close to a television screen.

Please read through this manual fully before using the subwoofer. All sound installations require some planning and experimentation if you are to get the best out of the products used and this manual will guide you in this process.

AS THE SUBWOOFER IS CONNECTED TO THE ELECTRICITY POWER SUPPLY, IT IS IMPORTANT THAT YOU FAMILIARISE YOURSELF WITH THE SAFETY INSTRUCTIONS AND HEED ALL WARNINGS.

Keep this manual in a safe place for future reference.

B&W loudspeakers are distributed to over 50 countries world-wide and we maintain an international network of carefully chosen and dedicated distributors. If you have a problem which your dealer cannot resolve, our distributors will be more than willing to assist you.

UNPACKING (Figure 1)

The easiest way to unpack the subwoofer and avoid damage is as follows:
Open the carton flaps right back and invert the carton and contents.
Lift the carton away from the product.
We recommend that you retain the packaging for future use.
In addition to this manual, the carton should contain:

- 1 subwoofer
- 1 accessory pack containing:
  - 4 spikes with lock nuts
  - 4 self-adhesive rubber feet

A TOUR OF THE SUBWOOFER (Figure 2)

1. Heatsink
2. LINE LEVEL connectors
3. SPEAKER LEVEL connectors
4. LOW-PASS filter frequency control
5. VOLUME control
6. PHASE switch
7. ON/OFF switch
8. Power cord
9. Voltage rating label

POSITIONING THE SUBWOOFER

Because the subwoofer produces only low-frequency sounds, positioning is less critical in some respects compared to full-range speakers. Directional information is much less precise and you have more choice where to place the speakers to good effect. This said, best results are obtained if the subwoofer is placed between the satellite speakers or in the vicinity of one of them. If you use two subwoofers, it is best to put one near each satellite speaker.

Placing the subwoofer behind the listeners, even in surround sound installations, generally gives inferior imaging; but may be an acceptable compromise if domestic considerations dictate.

As with all speakers, the proximity of room boundaries affects the sound. Bass is generally increased as more surfaces come into close proximity with the speakers. Unlike full-range speakers, however, you can always restore the correct overall system balance by adjusting the volume level of the subwoofer. The more boost you get from the room, the less hard the speaker has to work; but there is a down side. Corner positions often excite more low-frequency room resonances, making the bass more uneven with frequency. There is no substitute for experiment as all rooms behave differently, so try the subwoofer in a variety of positions before making a final decision. A piece of music with a bass line ascending or descending the musical scale is useful for assessing the smoothness of the bass response. Listen for exaggerated or quiet notes. Having a separate subwoofer does enable you to optimise for room resonances independently from siting the satellite speakers for best imaging.

If the subwoofer is to be used in a confined space (eg in custom furniture), the space must be ventilated to allow sufficient air to circulate and cool the unit. Ask your dealer for advice.

The subwoofer is supplied with four spike feet. The spikes pierce through carpet pile, giving a firm support directly to the floor surface without crushing the pile. When fitting spikes, first screw the lock nuts fully onto the spikes, then screw the spikes fully onto the threaded inserts in the base of the cabinet. If the unit rocks, loosen the relevant two opposing spikes until the support is firm, then re-tighten the lock nuts to the inserts. If the unit is to be placed on a vulnerable surface, either place a protective disc under each spike or fit the four rubber pads in place of the spikes.

ELECTRICAL CONNECTIONS

Disconnect all sound system equipment from the power supply until the signal connections have been made and checked. This avoids the risk of damage whilst connections are made or broken.

The function of the subwoofer is to receive signals from the amplification chain and, where necessary split the signal into low bass and higher frequencies and feed the latter back out to the satellite speakers. Left and right channel inputs may be combined into a single mono low bass feed to the subwoofer drive unit if required.

The subwoofer will input and output both line level signals via the RCA Phono sockets and speaker level signals via the binding posts located on the back panel, giving a flexible choice of connection methods. However, you must not use a mixture of line level and speaker level connections in the same installation. If you have a choice between line level and speaker level connections, choose line level.

Use the following table to select the correct wiring method for your installation:

Application	Equipment		Connections
Home Theatre	Decoder with separate power amplifiers	With subwoofer output	Figure 3
		No subwoofer output	Figure 4
	Decoder with integrated power amplifiers	With subwoofer output	Figure 5
		No subwoofer output	Figure 6
Stereo Audio	Separate pre- & power amplifiers	One or more subwoofers with output combined into a single mono signal	Figure 7
		Two subwoofers with separate left and right signals	Figure 8
	Integrated amplifier	One or more subwoofers with output combined into a single mono signal	Figure 9
		Two subwoofers with separate left and right signals	Figure 10

USING MORE THAN ONE SUBWOOFER

Using more than one unit in a single installation can improve performance in the following ways:

- Maintain stereo separation to the lowest frequencies.
- Cope with larger listening rooms.
- Enable greater maximum sound output - often useful for effectively reproducing special effects in Home Theatre applications.
- Smooth out the effects of low-frequency room resonances.

If you are using two subwoofers for stereo audio, stereo separation is improved if each channel has its own subwoofer, providing each one is sited close to the relevant satellite speaker.

If the subwoofers cannot be ideally sited, or if you are using a dedicated subwoofer output from a decoder, connect the second subwoofer from the first. If using a decoder, use only one input channel. For two channel audio, both input channels should be used.

DOUBLE CHECK THE CONNECTIONS

Before auditioning the sound quality of your new installation and fine tuning it, double check the connections. All too often, users complain that they cannot get a decent sound however they set the controls, only to discover something has been wrongly connected. Make sure that:

- The phasing is correct - there should be no positive to negative connections (this applies only to speaker level interconnects). If some thing is out of phase you may get a fuzzy sound with an imprecise and floating image, a lack of bass or a combination of the two.
- There are no left to right mix-ups - this can result, for example, in the orchestra being the wrong way round or, more disastrously, sounds on your home theatre going in the opposite direction to the action on the screen.

SWITCHING ON AND OFF

We recommend that you switch the subwoofer on before any power amplifiers receiving signals from the subwoofer. Similarly, when switching off, switch the subwoofer off last.

SETTING THE CONTROLS

There are three controls to consider:

- The LOW-PASS filter frequency
- The VOLUME control
- The PHASE switch

The optimum settings depend on the other equipment used with the subwoofer.

Use with THX® controllers (including THX controllers set in non-THX mode)

The AS6 is not an THX licensed component, but may be used with a THX controller if desired.

- Set the LOW-PASS filter frequency to maximum.
- Set the volume control to the half-way (12 o'clock) position (this is a standard THX preset level)
- Set the PHASE switch initially to 0°, then see the section below on fine tuning.

Ensure that the subwoofer function on the THX controller is enabled. When so configured it incorporates all the filtering and level setting required for the subwoofer in all modes. For level calibration, the internal test noise and channel level controls in the THX controller should be used. In all cases the levels should be set so as to obtain 75dB spl (C-weighted) at the listening position from the controller's internal noise test signal. Refer to your controller manual for further details as to how to set the levels. Inexpensive sound level meters are readily available from electronics stores and should be used to calibrate the levels.

Use with other home theatre decoders

- If the decoder has a dedicated subwoofer output and an internal low-pass filter for the subwoofer having a slope of 2nd-order (12db/octave) or greater, set the LOW-PASS filter frequency to maximum, otherwise set it initially to 80Hz.
- Set the volume control initially to the half-way (12 o'clock) position, then see the section below on fine tuning.
- Set the PHASE switch initially to 0°, then see the section below on fine tuning.

Use for stereo audio

- Set the LOW-PASS filter initially to 80Hz then see the section below on fine tuning.
- Set the volume control initially to the half way (12 o'clock) position, then see the section below on fine tuning.
- Set the PHASE switch initially to 0°, then see the section below on fine tuning.

FINE TUNING

The optimum settings of the PHASE switch and the LOW-PASS filter frequency are inter-related and also dependent on the low-frequency cut-off characteristic of the satellite speakers and the relative positions of all the speakers in the installation.

Set the system up in the preferred position and play some programme with a steady bass content. The optimum setting for the low-pass cut-off frequency depends on several variables - the bass performance and power handling of the satellite speakers, the number of subwoofers used and their position relative to the satellite speakers. The range 80-90Hz is a good starting point for the LOW-PASS frequency. Unless two subwoofers are used to preserve separate right and left channel information and are sited close to the relevant satellite speakers, using a higher cut-off frequency may compromise the stereo image and should only be considered if the bass performance of the satellite speakers is particularly limited.

At each setting of the cut-off frequency, listen with the phase switch in both positions. The correct one is that which gives the fullest bass and that will depend on the bass characteristics of your satellite speakers and the relative distances of the subwoofer(s) and the satellite speakers to the listeners. When using more than one subwoofer, ensure that each one has its cut-off frequency and phase switch set the same way.

If at any time you make changes to the amplification of the system such that you change from speaker to line level connections to the subwoofer, it is worth checking the phase setting again, as the speaker level and line level high-pass filter phase characteristics of the subwoofer are different.

Set the loudness of the subwoofer relative to the satellite systems to your liking. Use a wide variety of programme material to get an average setting. One that sounds impressive on one piece may sound overpowering on another. Listen at realistic levels as the perception of balance varies with sound level.

If you get problems with lumpy bass - if certain bass notes are exaggerated more than others - then you probably have a room interface problem and it is worth experimenting with the placement of the subwoofer. What may seem like small changes in position - 15cm (6in) or so - can have a profound effect on the sound. Try raising the subwoofer clear of the floor as well as lateral movement. The use of multiple subwoofers can smooth the effects of room resonances as each subwoofer will tend to excite resonances at different frequencies. If you alter the relative distances from the subwoofer(s) and satellite speakers to the listeners appreciably, reassess the phase switch setting. You should also check the level setting of the subwoofer (using either the decoder output levels or the volume control on the subwoofer amplifier as appropriate), but only after setting the phase correctly.

FIGURE 1

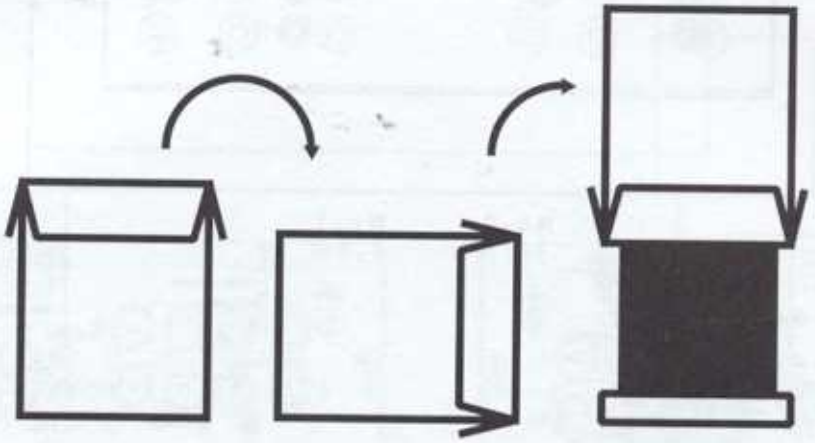


FIGURE 2

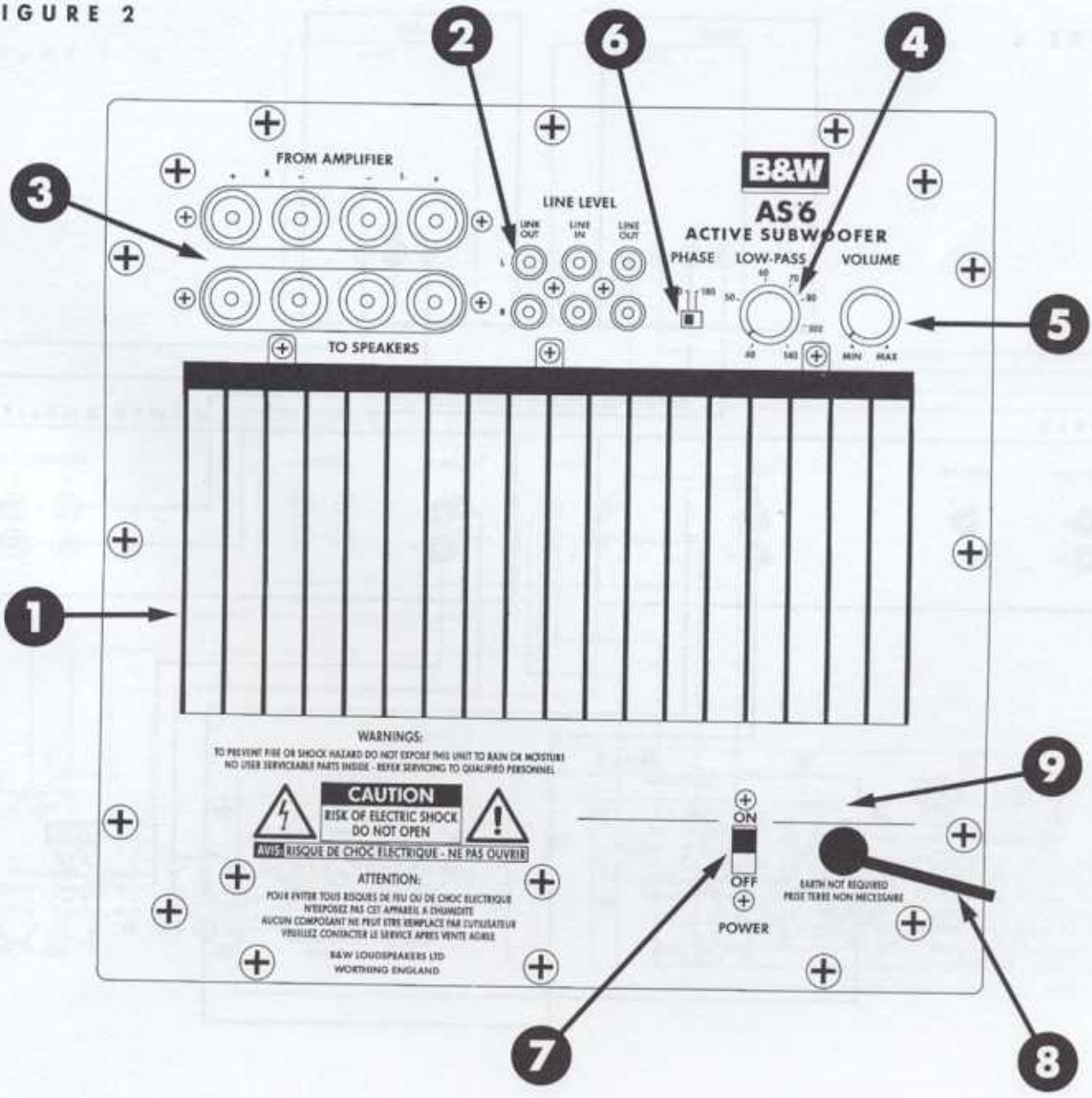


FIGURE 3

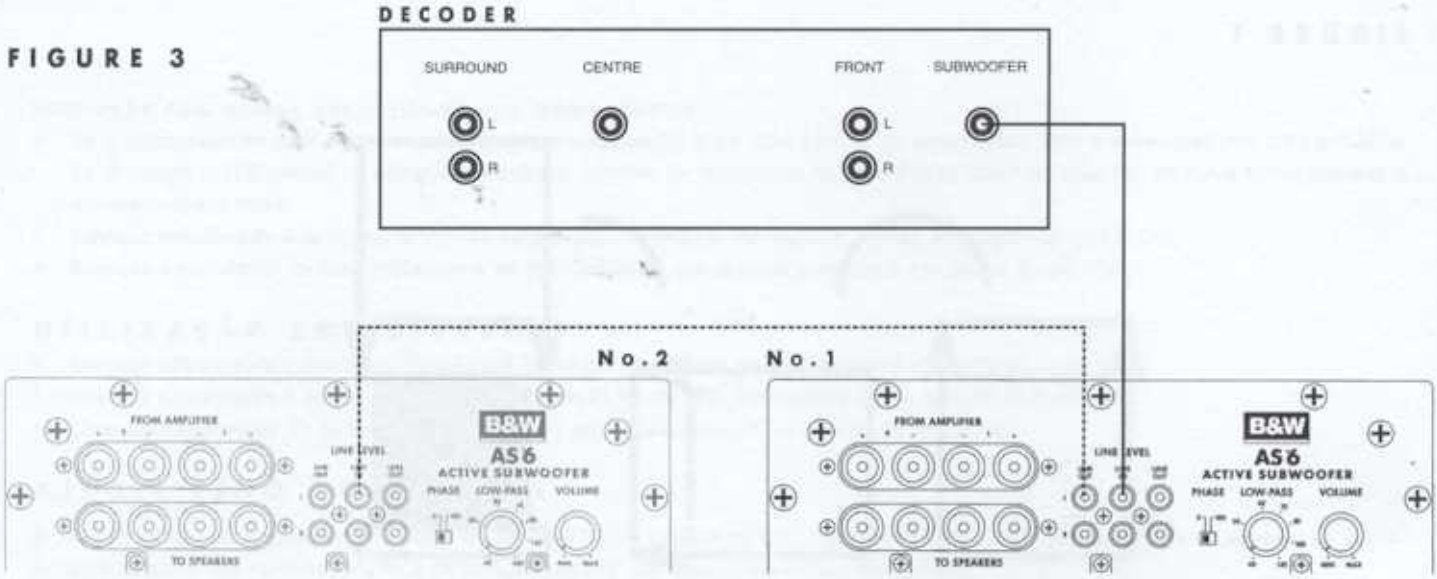
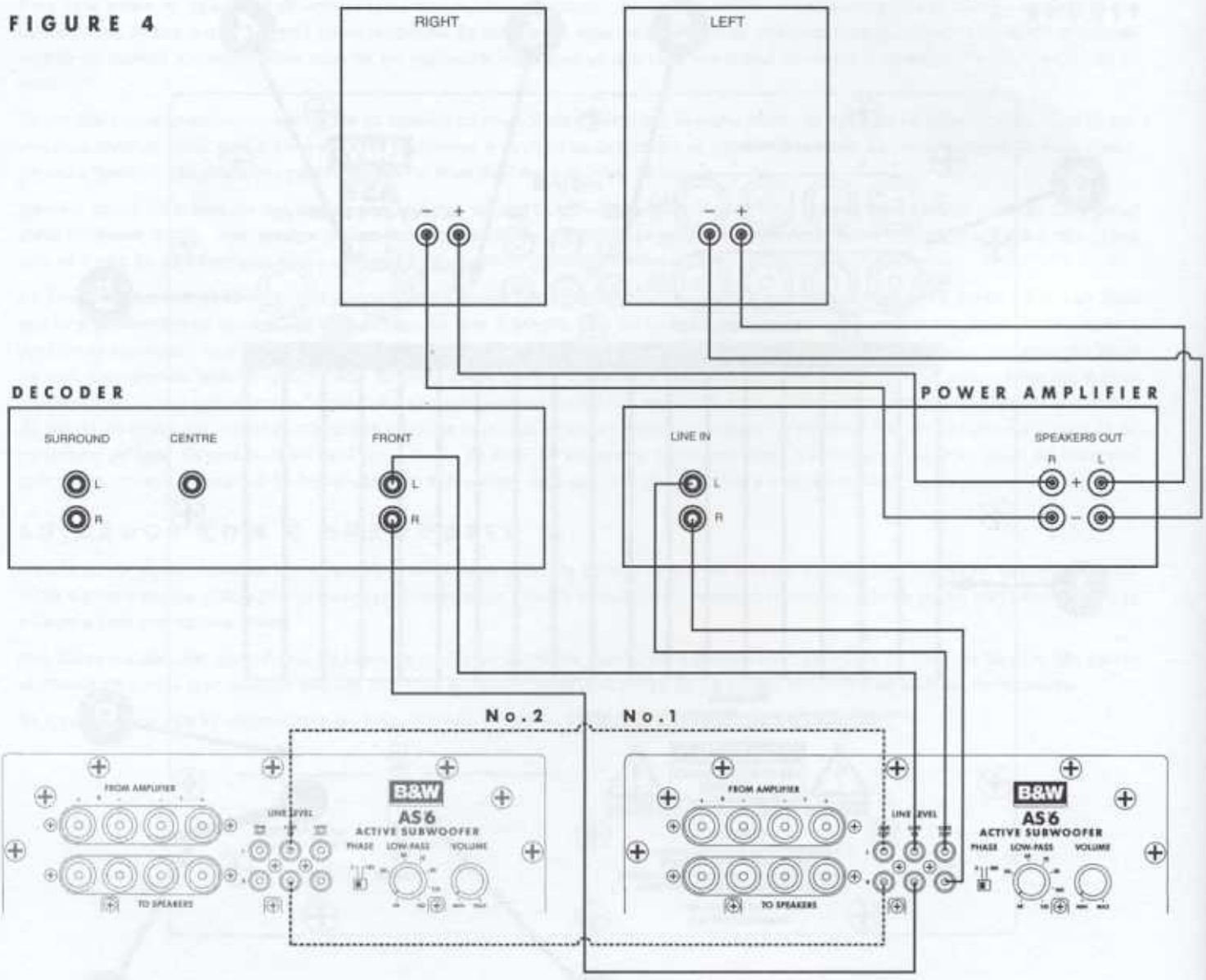


FIGURE 4



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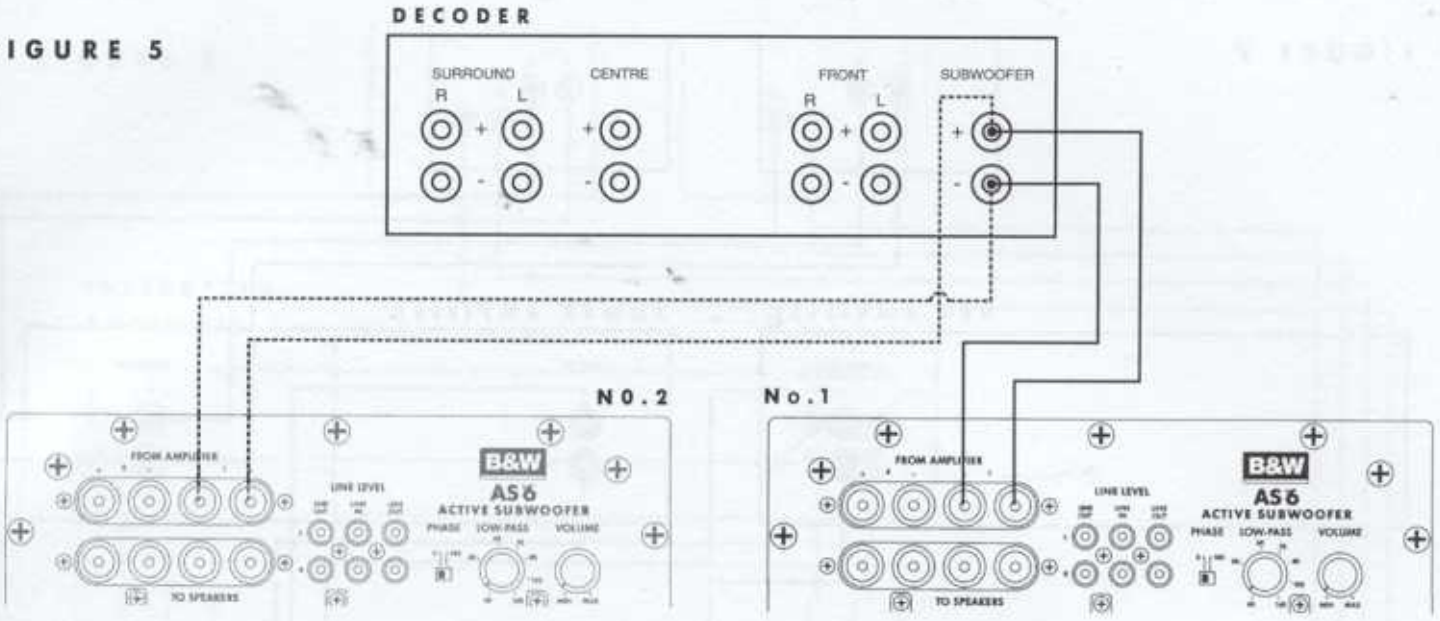


FIGURE 6

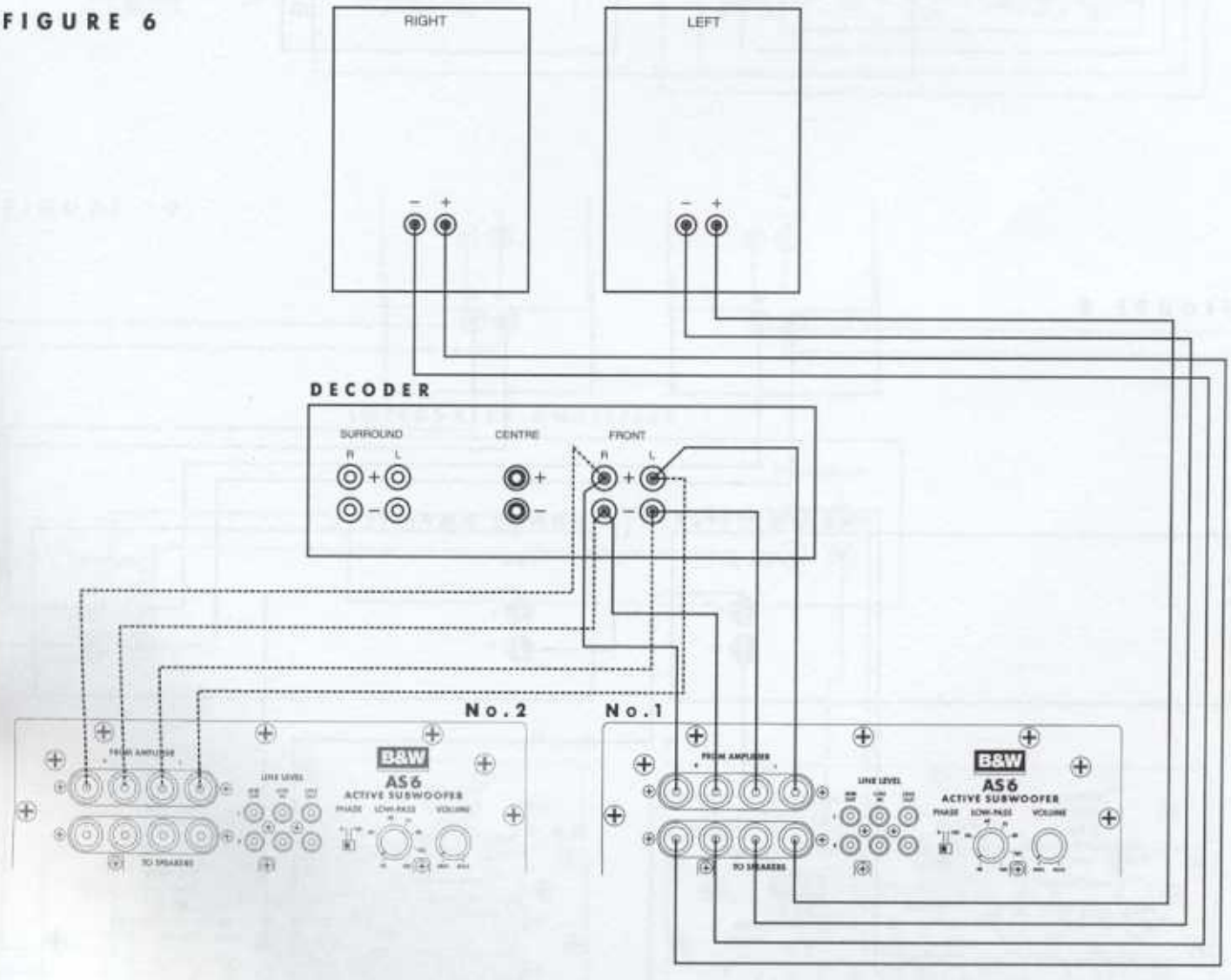


FIGURE 7

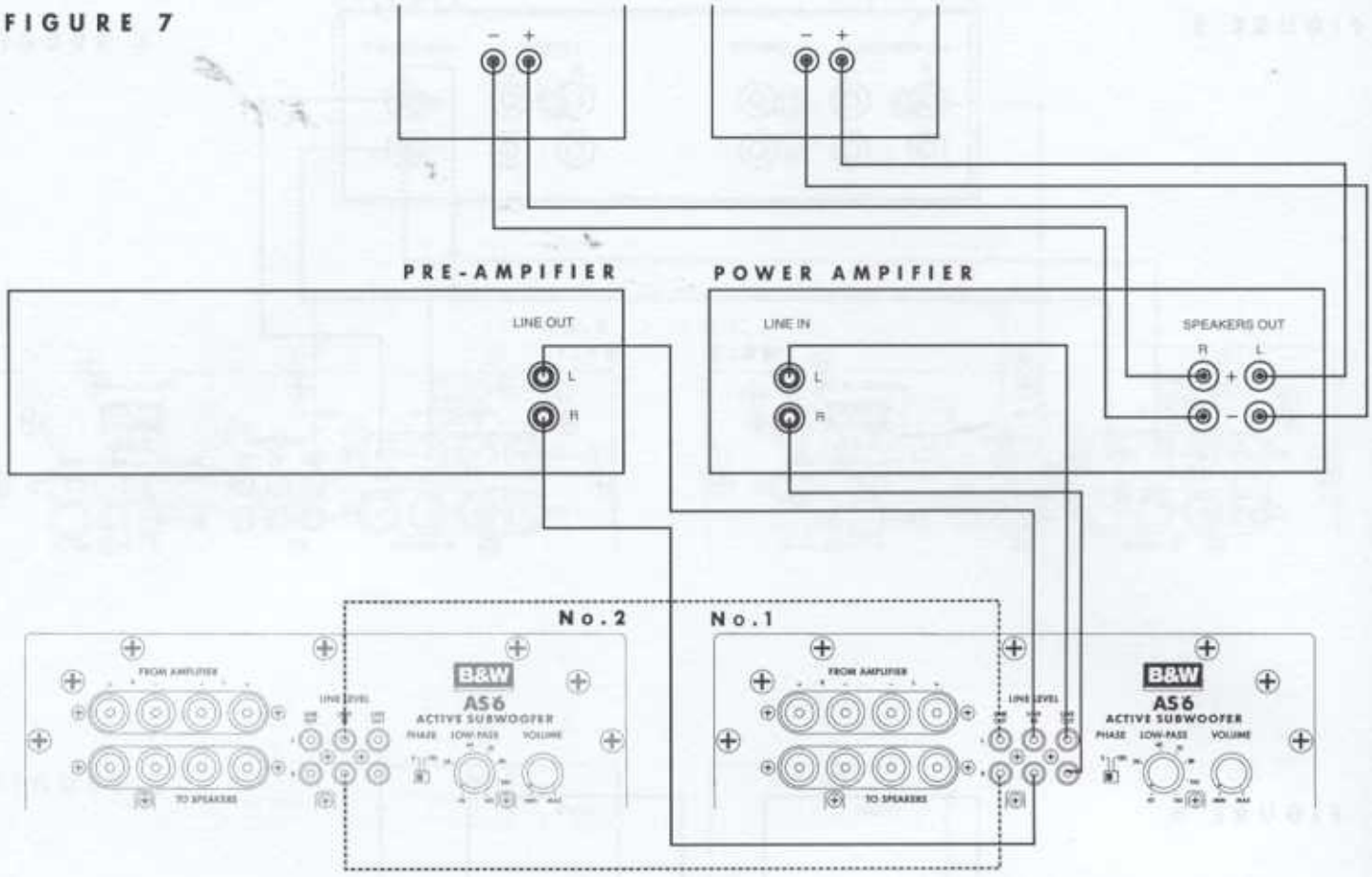


FIGURE 8

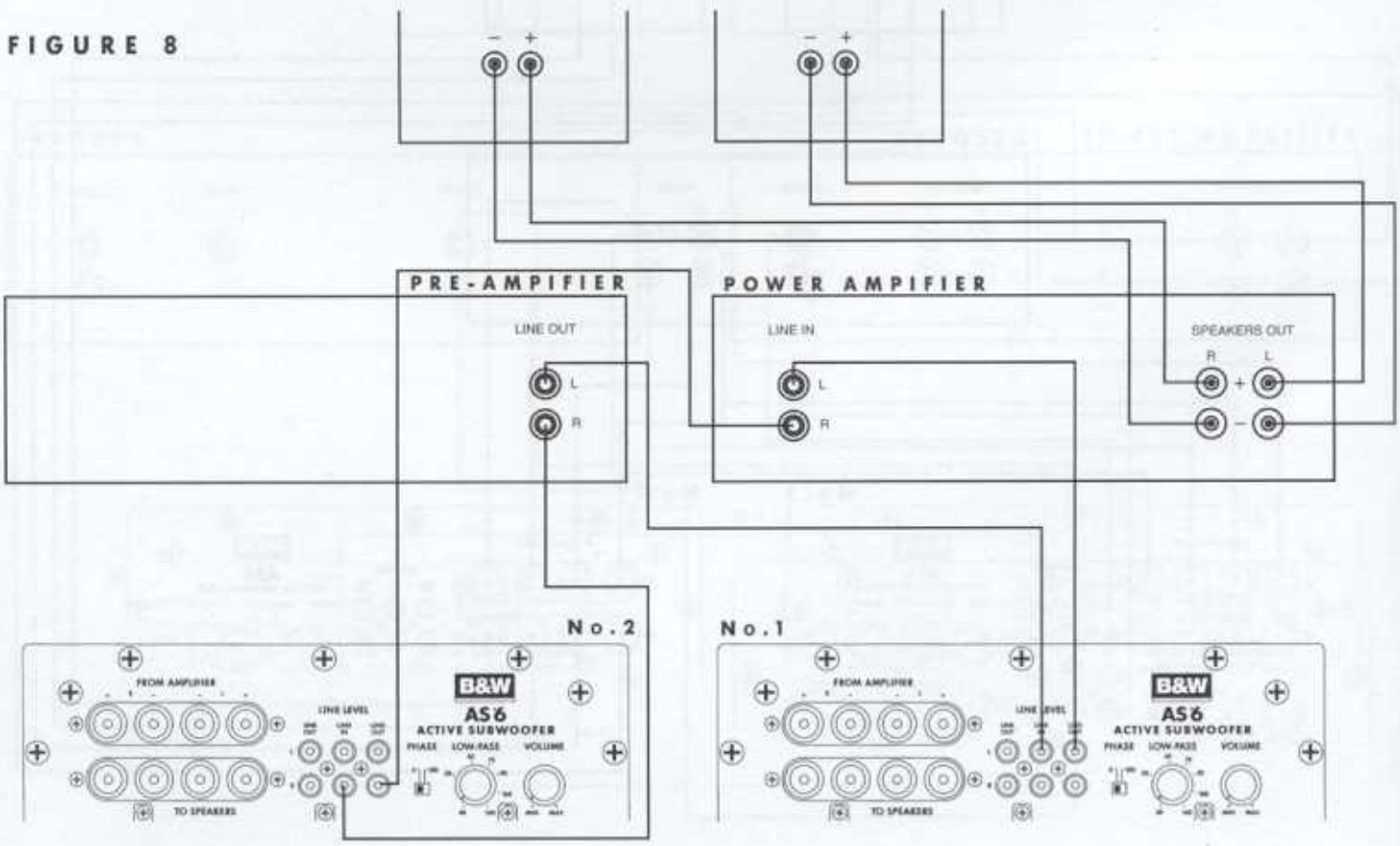


FIGURE 9

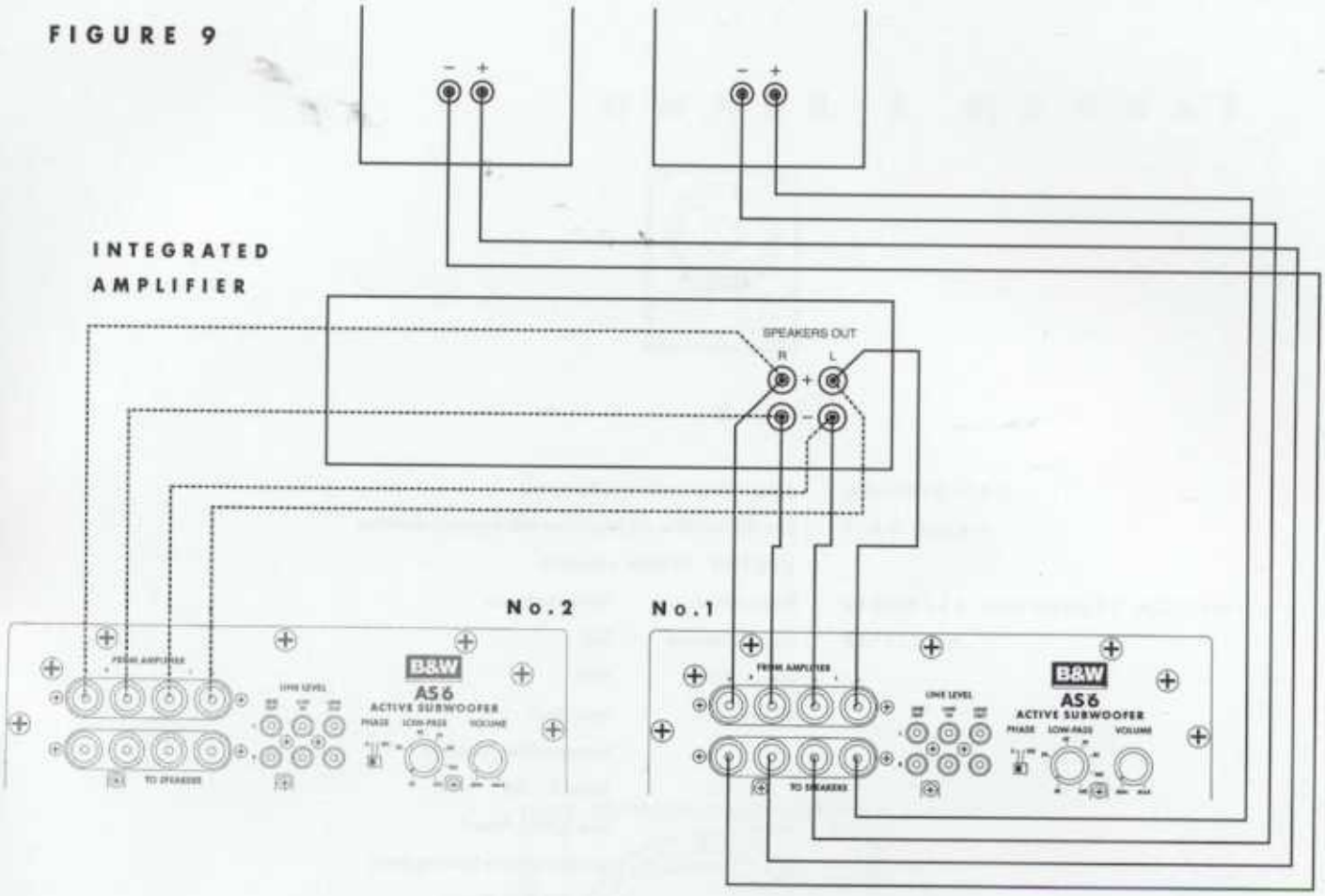
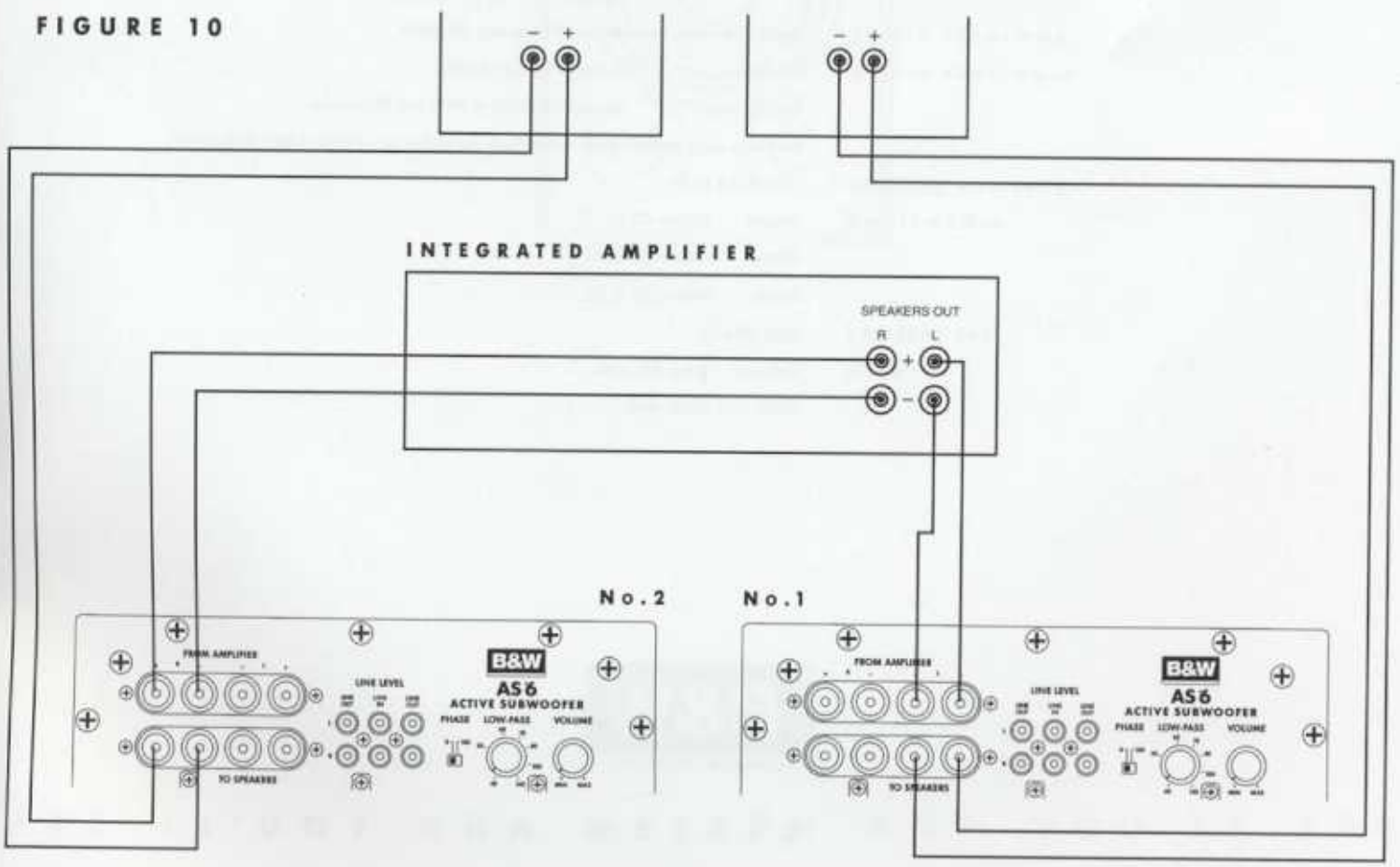
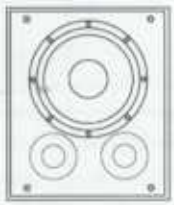


FIGURE 10





A S 6

DESCRIPTION	Active vented-box subwoofer system	
DRIVE UNIT	One 300mm (12in) dia long-throw with magnetic shielding	
SYSTEM FREQUENCY RESPONSE	±3dB 30Hz - 40/140Hz adjustable	
AMPLFIER	Power Output	100W continuous
	Input Impedance	5kΩ
	Signal / Noise	90dB
	Functions	Input Level
		Low-pass filter frequency
		Phase 0° / 180°
	Inputs	Line In (RCA Phono)
		Speaker Level In (binding posts)
	Outputs	Line Out (RCA Phono)
		Link Out (RCA Phono)
		Speaker Level Out (binding posts)
LOW-PASS FILTER	Active 2nd-order, variable cut-off frequency 40-140Hz	
HIGH-PASS FILTER	Line level:	active 3rd-order at 80Hz
	Speaker level:	passive 1st-order at 80Hz into 8Ω resistor
	(response using speaker level connections dependent on satellite system impedance)	
INTERNAL VOLUME	65litres (2.3 cu ft)	
DIMENSIONS	Height:	508mm (20 in)
	Width:	450mm (17 $^{3}/_{4}$ in)
	Depth:	455mm (17 $^{3}/_{4}$ in)
NET WEIGHT	24kg (52.8 lb)	
FINISH	Cabinet:	Black Ash vinyl
	Grille:	Black cloth

B&W

LISTEN AND YOU'LL SEE

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